

REMARKS

In light of the foregoing remarks and amendments set forth herein, reconsideration and withdrawal of the objections and the rejections set forth in the Final Office Action dated February 11, 2005 are respectfully requested. Claims 1-12 were pending in this application at the time the present Office Action was mailed. In the Office Action, the Examiner objected to claims 1 and 7 and rejected claims 1-12. Claims 1 and 7 have been amended in this correspondence; accordingly, claims 1-12 are now pending.

Response to the Objections to Claims 1 and 7

Claims 1 and 7 were objected to for lack of antecedent basis in last line and next to last line, respectively. Claims 1 and 7 are amended to satisfy the requirements.

Response to Section 102 Rejection of Claims 1-12

Claims 1, 2 and 4-6, including independent claim 1, were rejected under 35 U.S.C. § 102(b) as being anticipated by Inoue et al. ("Inoue") U.S. Patent No. 6,211,509. In short, the Office Action argued that Inoue illustrates a similar semiconductor circuit, wherein most of the current passes through the body of the amplification transistor. Applicant acknowledges that Inoue does teach a four transistor CMOS pixel, such as that illustrated in the present specification in Figures 1 and 2.

Claims 7-12, including the independent claim 7, were rejected under 35 U.S.C. § 102(b) as being anticipated by Matsunaga et al. ("Matsunaga") U.S. Patent No. 6,239,839. Like above, the Examiner argues that Matsunaga illustrates a similar semiconductor circuit. Applicant acknowledges that Matsunaga teaches a CMOS image sensor.

While neither of the cited references teach or suggest an amplification transistor in which most of the current passes through the body or substrate, the Examiner asserts that the passage of the current through the body or substrate "is an inherent function of the structure and since the prior art has the same structure and materials as claimed invention

it will have the same inherent function," and that " almost all the current will flow through the channel when a transistor is on." **This is simply not true.**

While the channel may be a part of the substrate, it is a very thin sheet of surface charge, at the surface of the substrate, which has little or almost no thickness according to the fundamental literature of this field (e.g., "*Fundamentals of Semiconductor Devices*" by Edward S. Yang, McGraw Hill, 1978, Chapter 8). Almost no current passes through the substrates except through this thin surface sheet. On the other hand a configuration may be devised, as claimed in the present invention, that makes most of the current pass through the rest of the substrate. Such current passage, in contrast to the assertion of the Office Action, is neither typical nor inherent.

In addition, neither of the references cited in the Office Action attempts to solve the problem being solved by the present invention. The cited references do not even address the problem. Therefore, in light of the above arguments, a *prima facie* case of anticipation under Section 102 has not been established with regard to claims 1 and 7; hence, the undersigned respectfully requests the withdrawal of the respective rejections.

Claims 2 and 4-6 depend from claim 1 and claims 8-12 depend from claim 7 and hence include the features of claims 1 and 7, respectively. For reasons discussed above and for the additional features of these claims, a *prima facie* case of anticipation under Section 102 has not been established with respect to these claims and accordingly the Section 102 rejection of claims 2, 4-6, and 8-12 should be withdrawn.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue as applied to claim 1 above, and further in view of Matsunaga. Claim 3 depends from claim 1 and hence includes the features of claims 1. For reasons discussed above and for the additional features of this claim, a *prima facie* case of obviousness under Section 103 has not been established with respect to this claim and accordingly the Section 103 rejection of claim 3 should be withdrawn.

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In view of the foregoing, all of the claims pending in the application are in condition for allowance and, therefore, a Notice of Allowance is respectfully requested. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-6488. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0665, under Order No. 384938080US from which the undersigned is authorized to draw.

Dated:

3/3/05

Respectfully submitted,

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